

Claims

What is claimed is:

1. An electro-optical cable comprising:

an optical element comprising an elongated glass fiber core, a medial cushioning layer concentrically surrounding the glass fiber core, and an outer hard shell material surrounding the medial cushioning layer; and

at least one electrically conductive element comprising an elongated conductive core and a dielectric layer concentrically surrounding the electrically conductive core.
2. The electro-optical cable of claim 1 wherein the medial cushioning layer of the optical element comprises polytetrafluorethylene.
3. The electro-optical cable of claim 1 wherein the outer hard shell layer of the optical element comprises polyetheretherketone.
4. The electro-optical cable of claim 1 wherein the conductive core of the electrically conductive element comprises copper.
5. The electro-optical cable of claim 1 wherein the dielectric layer of the electrically conductive element comprises dielectric polytetrafluorethylene.
6. The electro-optical cable of claim 1 wherein the electrically conductive element has a layer of an aromatic co-polyimide concentrically surrounding the dielectric layer.
7. The electro-optical cable of claim 1 wherein the optical element has a layer selected from an acrylate and a polyimide interposed between the glass core and the cushioning layer.

8. The electro-optical cable of claim 1 wherein there are a plurality of electrically conductive elements.
9. The electro-optical cable of claim 1 which has an outer peripheral protective jacket.
10. An electro-optical cable comprising:
 - an optical element comprising an elongated glass fiber core, a polytetrafluorethylene medial cushioning layer concentrically surrounding the glass fiber core, and an outer hard polyetherketone layer surrounding the medial cushioning layer; and
 - at least one electrically conductive element comprising an elongated conductive core and a dielectric layer concentrically surrounding the electrically conductive core.
11. The electro-optical cable of claim 10 wherein the conductive core of the electrically conductive element comprises copper.
12. The electro-optical cable of claim 10 wherein the dielectric layer of the electrically conductive element comprises dielectric polytetrafluorethylene.
13. The electro-optical cable of claim 10 wherein the electrically conductive element has a layer of an aromatic co-polyimide concentrically surrounding the dielectric layer.
14. The electro-optical cable of claim 10 wherein the optical element has a layer selected from an acrylate and a polyimide interposed between the glass core and the cushioning layer.

15. The electro-optical cable of claim 10 wherein there are a plurality of electrically conductive elements.
16. The electro-optical cable of claim 10 which has an outer peripheral protective jacket.
17. A light transmitting element comprising:

an elongated glass fiber core, a medial cushioning layer concentrically surrounding the glass fiber core, and an outer hard shell material surrounding the medial cushioning layer.
18. The light transmitting element of claim 17 wherein the medial cushioning layer of the optical element comprises polytetrafluorethylene.
19. The light transmitting element of claim 17 wherein the outer hard shell layer of the optical element comprises polyetheretherketone.
20. The light transmitting element of claim 17 wherein the optical element has a layer selected from an acrylate and a polyimide interposed between the glass core and the cushioning layer.